

STATE OF HEALTH CARE IN MAHARASHTRA

A Comparative Analysis

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ERRATA

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Please read p1, line 6 as grateful

p2 para 1 line 5 as Engels said

p2 para 1 line 9 as State of Kerala

p3 para 1 line 16 as 1991

p3 para 1 lines 21-22 Maratha-Brahmin - OBC alliance

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p3 para 1 line 34 as Dhanagare DN 1992

p3 para 2 line 8 as George A. 1986

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p23 para 3 line 4 as facilities have to be thought of

p24 Table I P.C.I All India figure is at current prices.

p24 Table I % of share of Manuf. Sector to GDP at 80-81 prices for '88-'89.

p25 Table I Notes * % of Neo Budhists 6.3 excluding S.C.

p26 Table II I.M.R per 1000 live births.

p27 Table II % of children taken booster dose of Polio 1986-87.

p28 Table III No. of beds per 1000 only percentages before rural and private removed.

p29 All India figures for Table IV are 4816, 27946, 3.14, 3.04 Kms, 6.67 Kms and 22.27 Kms.

p30 Table VI Note Data with regard to M.P is low due to

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Alex George

Sunil Nandraj

1. HEALTH CARE IN MAHARASHTRA

1.1 Introduction

On a societal level such as the "large cultural systems" (Nathan Dev 1991) which constitute India's linguistic states comprising millions of people, health policy and the resultant development in the field of health is a function of economic, social and political structures. But even as Engel's economics is the determinant factor only in the last instance (qtd in Althusser 1977 p. 11). Althusser went further when he pointed out that : 'from the first moment to the last, the lonely hour of the last instance never comes' (Ibid p 113). The achievements of Kerala, Sri Lanka, China and certain Latin American countries such as Cuba and Nicaragua which have attained remarkable indicators of health without a high per capita income (P.C.I) or high level of industrialisation points to the need to look at the social and political structures which impinge on health development more deeply.

An observer of the health indicators of Indian states will come across two broad patterns of commendable growth. One typified by Maharashtra and Punjab which have attained relatively high indicators of health against the background of a high P.C.I, and moderately high CMIE index of economic development and the other characterised by Kerala with a very high development in health indicators, but in the context of a low P.C.I, low level of industrialization, as opposed to comparatively better infrastructural indicators as reflected in its CMIE index for infrastructural development. While the first pattern could be attributed to the trickling down effect of capitalist modernization of an industrial-cum-agrarian variety in Maharashtra and of a predominantly agrarian variety in Punjab, (Duggal R 1992) the second pattern is rooted in certain social, political, geographic and demographic particularities of Kerala (Tharakan P.K. 1984; and Nag Moni 1989) of which the social and political are of relevance to us in our understanding of the health development in Maharashtra.

1.2 Historical Antecedents

Both Maharashtra as well as Kerala have witnessed strong movements of the lower castes. Maharashtra not only had an earlier lead in the social reform movement in the form of the Satyashodhak Samaj set up by Jyotiba Phule in 1873, but at this stage the leadership of the movement remained in the hands of the Malis and other backward castes (OBC). It was after the death of Jyotiba Phule and with the entry of the Maharajah of Kolhapur

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Shahu Chatrapati that the leadership began to shift in to the hands of the landed elite among the Marathas (Gore M.S. 1989 pp 11-41 and pp 53-63). As a continuation of this trend in 1930s the non-brahmin movement started getting absorbed into the Congress (Ibid pp 68-70; omvedt. G 1976 p.2). Still there were currents of radicalism within the non-brahmin movement such as the one represented by the Peasants and Workers Party (PWP) led by Keshav Rao Jedhe. It must be borne in mind that in the 1952 elections the undivided Communist Party of India (CPI) and the non Brahmin radical parties such as the PWP had scored almost the same percentage of votes as the C.P.I in Kerala and Andhra i.e about 15-20% (Omvedt. G 1976 pp 281-282). The political formations floated by Dr. Ambedkar such as the Independent Labour Party (I.L.P) and the Republican Party of India (R.P.I) also could not go too far in mobilising all the depressed castes (Shah G. 19 P.111). Towards the end of his life in 1956 Ambedkar was involved in a series of correspondence with Dr. Ram Manohar Lohia and his associates on an alliance between the Dalit movement and the socialists. This however did not come through (Lohia, 1979 pp 29-37). With the absorption of P.W.P. also into the Congress fold a formidable fortress of O.B.C. - Maratha-Brahmin alliance was built up (Zelliof. E 1970 and Omvedt. G 1976 p.2,p281) which distributed the benefits of power to the elites of these 3 groups and later on extended its spoils to the Dalit elite also. In the process whatever development that has taken place in such sectors as health which are intimately related to the well being of the people is more out of an evolutionary fall out of developing capitalism, which for its unhindered growth required also that some form of a new patron client relationship was nurtured between the elite-politicians and the electorate. This largely uncommitted model of development has resulted in vast rural - urban and intra regional disparities in Maharashtra to which even the unpreparedness in facing the current drought can also be attributed (Dhanagare D.N. 1991). We turn to these points in detail at a later stage.

In contrast to the socio-political scene of Maharashtra the social reform movements of the Ezhavas and Pulayas of Kerala which began during the 1890s prepared the social base for the anti-establishmentarian politics of the state. The Ezhava elite in their quest for better social status had mobilized the poorer sections of their community, who in the process got radicalized to an extent beyond which the elite could not satisfy them. (George 1980) At this point they turned to the communist movement which was emerging. True, the Travancore kings had created a large middle peasantry after crushing the Nair-feudal aristocracy, confiscating the land held by them and declaring all former tenants of this aristocracy as the tenants of the state who were later on granted ownership rights also in 1865. (Verghese T. 1970 p.64) True also, that in order to satisfy the aspirations of this large middle peasantry who became the social base of the so-called modern Travancore, the state had embarked

on various welfare measures in social services including health. But the breakthrough which Kerala made in the social sectors after independence cannot be seen as a mere vegetative outgrowth of the Travancore - Cochin model on to the rest of the less developed parts of the state which were under direct British rule. While the rightist forces wanted to penetrate some of the less developed districts in Malabar which were leftist strongholds, the welfare aspirations of the people of these districts itself are raised and they wanted to be on par with their counterparts in the better developed districts. The left governments which have ruled Kerala off and on for short durations have proved to be the nodal points setting progressive directions for the state. (Isaac, Kumar 1991) The left has been able to enforce a welfarist consensus in Kerala with the power of its mass base and the occasional chances to rule the state. Now, it has reached a stage where for fear of public reaction even the rightist political parties can't tamper with this consensus too much when they come to power at the state level.

In the following presentation we look into the specifics of Maharashtra's development in health in the context of other socio-economic indicators to substantiate the observations made above. We will be making comparisons with Punjab and Kerala as already mentioned and also with Bihar and Madhya Pradesh (M.P) which are not as developed as the other 3 states.

1.3 Socio-Economic Indicators

Wherever not mentioned in the text the sources of data used in this paper are stated with the Tables and Data sheets given at the end of this paper. Maharashtra has a population of 79 million according to 1991 census and with 9.4% of the country's land area, it is one of the largest states in India. Its density of population of 256 persons per sq.km in 1991 is comparable to that of India which is 267 per sq.km. At 1970-71 prices the state had a per capita income of Rs. 1039 in 1986-87 which is second only to Punjab which was Rs. 1652. The percentage share of the manufacturing sector to State Domestic Product (S.D.P) in 1988-89 at 1980-81 prices for Maharashtra was the highest in the country at 22.80%. It also had the largest number of persons working in non-agricultural enterprises. This pattern was also followed in the financial sector with the highest per capita bank deposits and advances. In most of these indicators of economic development Bihar and M.P fare very poorly. Punjab not only scores highly in per capita income but also registers good financial indicators. Basically an agricultural state, it can boast of 91.3% of irrigated land as opposed to Maharashtra's 12.4%. Kerala has middle level of P.C.I., very low percentage share of the manufacturing sector to S.D.P, less persons working in non agricultural enterprises compared to even Madhya Pradesh, but higher per capita bank deposits and like Punjab comparatively

less per capita bank advances. This can be linked to both the low level of industrial enterprise in these two states and the inflow of remittances from abroad.

Among the other infrastructural indicators of development it is noteworthy that Maharashtra has achieved 100% electrification of its villages. However without the data on rural domestic consumption of electricity, excluding agricultural consumption, this data can't carry us too far. In total road length per 1000 Sq.Kms Maharashtra comes highest, with M.P a distant second. Again without the Rural-Urban composition of this data we can't infer much. When it comes to percentage of villages connected by all weather roads, in Kerala it is 100% and Punjab 99%, Maharashtra's position is a distant 3rd with 53%, which however is much higher than that of Bihar and M.P which are abysmally low at 35% and 23% respectively in 1987-88.

Maharashtra has an urban population of 38.73% as per the 1991 Census which is the highest in India. Punjab and Kerala has 30% and 26% urban population, respectively. A large part of Maharashtra's urban population is concentrated in Bombay itself. The state according to 1981 census has to look after the well being of 22.6% of the population who are either scheduled castes (SC) Scheduled Tribes (ST) or Neo-Budhists (who are S.Cs who got converted in 1956 with Dr. Ambedkar). Punjab has the highest S.C. population of 26.9% whereas M.P has a combined total of 37% of SCs and STs.

Average size of land holding is an important indicator of distributive justice in a predominantly agricultural country like ours. However, here Maharashtra falls with the states like M.P and Punjab where the average size of holding is as high as nearly 3 hectare. Thanks partly to the successful land reforms in Kerala it is only 0.36 hectares and in Bihar only 0.87 hectares. Latter definitely not due to land reforms, but the high concentration of land in a few hands.

Coming to human indicators of development the sex ratio in Maharashtra in 1991 is 936 females / 1000 males which is not much higher than India's average of 929/1000. This is far higher than Punjab's 888/1000 or Bihar's 912/1000 but less than 1040/1000 of Kerala. Nowadays however under reporting of women is suggested as a reason for the low sex ratio. In literacy Maharashtra has made a remarkable improvement between 1981 and 1991 from 54% to 63%. Percentage of female literacy is all the same low at 51% in 1991, but even this is much higher than the national average of 39%. Drop out rates in I - Vth standards between '82-83 and 86-'87 was 42.1% in Maharashtra, which was slightly lower than the national average and closer to M.P's 42.4% and Punjab's 39.4% but is far below Kerala's achievement in this field of 0.4%.

1.4 Health Indicators

Mortality, life expectancy and morbidity are the major indicators of health status. In India the only information available is that collected through sample surveys for most of these. Some of the family welfare indicators can also be used derivatively for assessing performance in health.

In life expectancy, infant mortality, death rate and percentage of infant deaths to total deaths, which are indices directly linked to health care, and in other family welfare related indices such as birth rate and marital fertility which are indirectly linked to health, both Maharashtra and Punjab show quite interestingly similar levels of moderate achievements. Kerala has a very high level of attainment and at the other end of the spectrum M.P. and Bihar come as low attainers. Rural-Urban differences are manifest in Maharashtra and Punjab and even stronger in of M.P and Bihar. In the case of Maharashtra this is very clear in I.M.R, which is 64/1000 in rural areas as compared to only 44/1000 in 1990 in urban areas. Punjab has a lower I.M.R of 58/1000 in rural areas while its urban IMR is almost the same as Maharashtra's. Kerala has been able to bridge the rural-urban gap in health indicators and interestingly in some indicators like birth rate and marital fertility rate rural areas score over urban areas. This has been primarily due to the infrastructural development in rural Kerala, including health infrastructure. Maharashtra's decennial growth rate (1981-91) of 25.43 is higher than the national rate of 23.56.

This could have been comparatively lower but for the death rate which is 7.3, i.e 0.5 less than Punjab's and somewhat closer to Kerala's 5.9. Migration from other parts of the country to the urban centres could be another reason.

The larger studies on morbidity in India are those conducted by the National Sample Survey Organisation (NSS). But most of these have shown very low rates of morbidity compared to the studies undertaken by some non-governmental organisations. For example the 28th round of N.S.S. conducted in 1973-74 showed that for a recall period of two weeks, prevalence of acute diseases was 27.57 per 1000 population in rural Maharashtra and 32.18 per 1000 in urban Maharashtra. This was in comparison with 22.46 per 1000 in Rural India as a whole and 22.77/1000 in urban India. In chronic diseases, rural areas of Maharashtra recorded 1609 cases per 100,000 as against Rural India's 2098/100,000. (Sarvekshana July-Oct. 1980) The 42nd round of N.S.S. (1986-87) presented a prevalence rate of 64/1000 in rural areas of India and 31 per 1000 for the urban areas for a recall period of one month. Statewise breakup of this data is not available, (N.S.S.O 1989) due to the extremely fragmented manner in which data is presented. A study conducted by F.R.C.H in 1987 in the Jalgaon district of Maharashtra infact showed the prevalence rates are quite higher than the N.S.S. figures. For a recall period of one

month the prevalence rate for acute episodes was 95.40 per 1000 population and a chronic prevalence of 4702.71/100,000 population (Duggal R & Amin S 1989 P37 & P 17). Another F.R.C.H. study in two districts of Madhya Pradesh which is being finalised showed an acute prevalence rate of 162.17/1000 for a one month recall period and a chronic prevalence rate of 12824.46/100,000 (FRCH 1992). A study conducted by the Kerala Sasthra Sahitya Parishad also yielded high rates of morbidity in Kerala comparable with the F.R.C.H. figures. For a 2 week recall period Kerala has shown an acute prevalence rate of 206.39 per 1000 in 1987 and a corresponding figure of 13802/100,000 population for chronic ailments (Kannan K.P et.al) 1991 p.63, p.66).

Immunization

An evaluation study conducted by the National Institute of Health and Family Welfare (NIHFW) in 1986-87, after the immunisation programme was declared part of technology missions, children aged between 0-23 months showed that the states of Kerala and Maharashtra had achieved extremely high rates of immunization followed by Punjab which ranked moderately high while Bihar showed very poor achievement (Sokhey. J 1988 p.29,p.38). However the N.S.S. study of children 1-15 years which obviously included children born before the mission started and could not be effectively (immunised later showed much lower rates of immunisation (N.S.S.O Sarekshana April-June 1991).

It needs to be brought out at this juncture that the major illnesses of children in India such as diarrhoea and respiratory infections are not immunisable diseases and that therefore the attempt to project the immunisation programme as the guardian angel of India's children has to be taken with a pinch of salt only. 60 - 90% of deaths in the early age groups are caused by diarrhoea followed by respiratory infections. (Sathyamala, Seminar 354, Feb 1989). These non immunisable diseases deserve more attention because it is the children of the poor who are more prone to these diseases due to inadequate standards of food and hygiene.

1.5 Health Infrastructure

The registration information on private hospitals and dispensaries in India is far from satisfactory. But on the basis of the data from the registered hospitals and dispensaries we find a bias against the rural areas in many states. In both hospitals and dispensaries the rural-urban difference is quite high in Maharashtra. Eighty eight percent of hospitals and 91% of dispensaries in Maharashtra are in urban areas. Punjab's registration data on hospitals seems to be of poor quality. The total number registered is very low. But within this the rural-urban distribution is more even. In dispensaries a very high

percentage (85.38%) in Punjab are in rural areas. Seventynine percent of Kerala's hospitals and 71% of dispensaries are in rural areas. Seventy two per cent of all hospitals and 83% of all dispensaries in Maharashtra are in the private sector. Even in Kerala 92% of hospitals and 97% of dispensaries are in the private sector. This would be because of the increasing aspirations of people which cannot be met by the public health system which concentrates more on a quantitative expansion of primary health care. But equally important is the vanities of a status conscious middle class whose numbers are on the rise due to the inflow of gulf money, expansion of cash crop cultivation and trading in consumer articles.

There is a high disproportion in availability of hospital beds in Maharashtra between rural and urban areas, although it is not as high as in M.P or Bihar. While there is only one bed per 5096 persons in rural Maharashtra it is as low as one bed per 355 persons in urban Maharashtra. Rural Punjab has a bed population ratio of 1:1596 while urban Punjab has a ratio of 1:455. In Kerala the rural areas have 1 bed per 520 persons, as opposed to 1:235 in urban areas. The rural-urban differences in health infrastructure poses an even greater problem because only 53% of Maharashtra's villages have all weather roads. In M.P and Bihar where rural transportation is far less developed the urban bias in health infrastructure development will be compounded many times. There was one public hospital bed available per 1348 persons in Maharashtra as against 1 private hospital bed for every 2133 persons. In Punjab it was 1:1104 and 1:5323 respectively. The Kerala rate for the same were 1:985 and 1:655 respectively. The above data refers to the year 1990.

In the Governmental rural health infrastructure Maharashtra has 1 sub centre per 5145 persons as on 31.3.92 which is the best among the states we have chosen for comparison. The state is third in the PHC population ratio - 1 PHC per 292431 persons. Punjab is the first in this with 1 PHC per 6928 persons and Kerala a distant second with 1 PHC per 23442. In the Community Health Centre (CHC) population ratio the state is second with 1 CHC per 1.69 lakh population. Punjab is first here also with ratio of 1:1.64 lakh. M.P is third with 1:2.90 lakhs. Among the 5 states compared Maharashtra is in the fourth position in the maximum radial distance covered by Sub-centres which is 3.21 Kms, while it is as low as 1.32 Km in Kerala, 1.91 Kms in Bihar and 2.34 Kms in Punjab. In the case of PHCs, Punjab has the lowest maximum radial distance of 2.77 Kms followed by Kerala with 3.59 Kms and Bihar with 4.66 Kms. In Maharashtra it is as high as 7.62 Kms. In the maximum radial distance served by CHCs Punjab's stand's first with 13.4 Kms, Kerala second with 14.78 Kms and Maharashtra 18.35 Kms. The very high distance people in Maharashtra have to travel to reach the sub centres and PHCs, the basic units of rural public health care, calls for remedial action in favour of rural areas. (Rural Health Bulletin March 1992).

1.6 Health Personnel

The distribution of allopathy doctors in all the 4 states except Kerala is highly skewed in favour of urban areas. This observation is based on the 1981 census data which we feel is more accurate to arrive at certain patterns than the Medical Councils' data since the councils lists may contain more names of persons who have died or are not practising, and not all practitioners register themselves. Since 1991 data in this regard is not yet available we have only computed percentages for various categories of doctors which are unlikely to undergo any drastic change during 10 years. As high as 76% of allopaths in Maharashtra are in urban areas. An even higher 77% of them are in urban areas in M.P followed by Bihar with 65%. In Punjab the rural - urban break up of allopaths is more balanced at 40:60 respectively. In other systems also the pattern is not widely different except that the percentage of ayurvedics and homeopaths in rural areas is more in Bihar, while the corresponding percentage of homeopaths is higher in Maharashtra. M.P also has a slightly higher percentage of Ayurvedics in rural areas.

1.7 Health Expenditure

To know the emphasis, growth and the extent of health care in the country/state it is important to look at the expenditure on health. There are three major groups in the provision of health care and consumption of health resources in India. The public sector consists of the Central government, State government, Municipal and Local bodies. The private sector includes private organisations and institutions, corporate bodies providing medical care to their employees and the NGO's. Thirdly the households constitute the largest constituent who spend on health care. Compared to the private health sector finances, data on public health sector finances is fairly well documented.

Public Expenditures

The total financial outlays on Maharashtra are around 10 to 12 percent of the outlays for India. A breakup of the plan expenditure brings out the fact that in the 1st plan period, the state was spending 46.44% of its total plan expenditure on Social and Community services, which got reduced drastically to 18.85% in the 6th plan period. Irrigation, Power and Co-operation became top priority, this was at the cost of Social and Community Services. (Planning commission, state plans division, GOI, Statistical Abstract of Maharashtra) This shift in priorities could be attributed to the presence of the strong sugar lobby in Maharashtra politics. There is a wrong assumption that Maharashtra gives a high priority to the Social and Community services. Examining the latest available public expenditure of Maharashtra for the year 1990-91, this fact is reinforced. Out

of a total government expenditure (rev+cap, plan+non-plan) of Rs. 117437.63 millions, 27.03% was spent on Social and Community services, 3.68% on medical and public health, 0.54% on family welfare, 1.82% on water supply and sanitation and 0.94% on Housing. (Govt of Maharashtra 1992).

Comparing the trends in expenditure on health with other selected states, the same holds true. For the year 1985 Maharashtra incurred expenditure on health of only Rs. 35.62 per capita per year which was 6.31% of total government revenue expenditure. This was less than what is incurred in Kerala and Punjab. A point to be noted is that Kerala is economically, a poorer state when compared to Maharashtra, but still gives a high priority to health of its people. Health sector in Maharashtra in the late eighties is showing a down trend in percentage to government expenditure. Between the year 1985 and 1991 this ratio has halved in Maharashtra from 6.3% to 3.68%.

Further, analysing few selected components of health care like Curative Care, Disease programmes and Family Planning, one finds Maharashtra between the years 1971-1985, compared to Kerala and Punjab, gave priority to family planning services, (17.20%) and diseases control programmes (19.35%). The latter two states and Bihar spend more than 50% of their health expenditure on provision of curative care services, as compared to Maharashtra which spends only 24.64% of its health budget on curative care. Various studies have shown that curative care is the main need of the people in rural areas, but what is instead given is family planning services. Family Planning is one of the main priorities for all the states and there has been a steady increase in terms of outlay and expenditure. The large allocation to disease control programmes is more a historical one. The large health bureaucracy is supported under this programs. The various national programmes which were started had a huge army of personnel employed for the eradication of communicable diseases like Malaria, Leprosy, Cholera, T.B etc. It is to maintain this army of personnel that the major part of the expenditure is incurred. (This fact is proved when we examine the detailed breakup of expenditure under each item).

We have analyzed the expenditure under each major head- Medical, Public health and Family welfare in Maharashtra during the year 1990-91. Maharashtra spent totally Rs. 4020.79 million on the health sector. 40.01% of the expenditure was on the medical account, 43.94% was spent on public health programmes and 16.03% was spent on family welfare.

Out of Rs. 1608.93 million on the medical account, 45.36% was expended for urban medical relief, while rural medical relief received only 3.55%, Employee State Insurance Scheme (ESIS) expenditure on its various hospitals and dispensaries (which is only for the organized sector employees) amounts to 24.61% and

22.70% was spent on medical education. Thus it is evident that 80 to 85 percent of the medical account expenditure is diverted to urban areas.

Within the public health account 43.40% of expenditure was incurred on Direction and Administration, this is in addition to the expenditure on salaries under each programme head. Disease Control Programmes accounted for 35.23% of total expenditure under public health account. Within the Disease Control Programmes more than half the amount is spent on the Malaria Control Programme; followed by Leprosy control programmes. Both these programmes accounted for 80% of the expenditure in the Disease Control Programmes budgets. Out of a total expenditure on malaria of Rs.372.51 millions, 66.66% goes into salaries. In most programmes 75% of the expenditure goes into salaries and very little on materials and supplies (which includes expenditure on drugs).

In respect of family welfare services there is priority given to the rural family welfare program 23.25% of total FP expenditure as compared to 5.98% in urban areas. Maternal and Child health services which is a crucial area is allocated only Rs.119.85 millions (18.59%). Here too when we look at the selected programmes, we find that salaries takes a major chunk of the expenditure. From the above analysis we infer that the State's major part of the expenditure on health goes into salaries and for the urban areas.

Private Expenditure

As mentioned earlier data on private sector expenditure on health is not generally available. There are micro level studies which give a fair account of the extent of private expenditure. A study undertaken by FRCH on household health expenditure in Jalgaon District of Maharashtra brought out the fact that on an average, a household spends Rs. 182.49 per capita per year on health care, which is 7.64% of total consumption expenditure; out of this total per capita expenditure 68.50% of the expenditure goes into practitioners' fees and medicines. When viewed in terms of rural urban differences we find that rural households spend Rs. 192.19 per capita per year, where as the urban households spend Rs. 170.97. With regard to maternity expenses for each case the average cost was Rs. 199.75. The average cost of a delivery was Rs. 208.92, of an abortion Rs. 300.43 and of a pregnancy Rs. 85.17. With regard to rural urban differences maternity in rural areas cost Rs. 235.63 per case and in urban areas Rs. 157.39 (Duggal R. with Amin S 1994). These findings are comparable with a similar study in two districts of Madhya Pradesh undertaken by FRCH which is presently under publication. The average per capita expenditure on health by the households in the above study worked out to Rs. 278.40 per year, with 74.98% of the expenditure going into doctors fees and

medicines. The health expenditure as percentage to total consumption expenditure was 7.7%. In another study undertaken by Kerala Shashtra Sahitya Parishad (KSSP) the per capita per year expenditure on health in rural Kerala was Rs. 178.33 (Kannan K.P 1991). These above studies show the high cost of expenditure on health borne by the households.

2 REGIONAL VARIATIONS WITHIN MAHARASHTRA

2.1 Background

The state is presently divided into 6 administrative divisions viz, Konkan, Nasik, Pune, Aurangabad, Amravati and Nagpur. The districts comprising of Konkan, Nasik and Pune divisions fall into the older classification of Konkan and Southern Maharashtra which are relatively better developed economically, compared to the districts of Aurangabad, Amravati and Nagpur divisions which come under the Marathwada and Vidarbha regions which are less developed. Sticking to the more popular older regional names is therefore convenient for analysis of variations over a larger geographical area than those covered under the new divisions which are smaller units.

Density of population is the highest in Greater Bombay according to the 1991 Census which is 16,434 persons per Sq.Km. Thane which is developing as a residential suburban district of Bombay comes second - 547 persons per sq.km with other relatively urban districts such as Pune and Nagpur having 352 and 332 persons per sq.km respectively. Greater Bombay has a low decennial population growth rate of 20.21; this is because the residential suburbs of Thane are attracting more of the recent migrants where the growth rate is as high as 55.95. Growth rate is relatively high in the other urban districts of Pune, Nasik, Nagpur and Aurangabad which are fast developing growth centres of the State.

In terms of economic development Greater Bombay ranks highest as per the CMIE index for socio-economic development which is 1088 points followed by Pune at 175 points and Thane at 165 points. By and large the districts of Konkan and Southern Maharashtra score higher on the CMIE index of economic development whereas in Marathwada and Vidarbha regions it is only the more industrialised and urbanised districts which score relatively higher than the other districts, some of which have scores as low as 42 (Parbhani) and 45 (Osmanabad). As per 1991 census, percentage of urban population and percentage of non-agricultural workers in total main workers is obviously high in the more industrialised and urbanised districts mentioned already.

Among the infrastructural indicators of development, as far as road transport which is the main form of transport in rural areas is concerned, the Marathwada and Vidarbha regions lag behind while the Konkan and Southern Maharashtra are much better off in this regard. Since all villages in Maharashtra are presumably electrified this ceases to be an indicator of development. Without need data on domestic consumption of electricity a meaningful comparison between divisions/ districts is not possible.

Since the age group wise data for 1991 census is not yet available we can't calculate the exact literacy rate after deducting the 0-6 years from the total population, which was the practice followed in the 1981 census. However we arrived at the 0-6 age group by extrapolating from the 1981 figures on the basis of the overall decennial population growth and divided the total number of literates by the total population minus the extrapolated sum of 0-6 age group which revealed that there is a relatively higher percentage of literacy in most of the districts of Konkan, Nasik, Pune, Amravati and Nagpur divisions as against those in Aurangabad division. Districts of Jalna, Parbhani, Bid and Nanded in Aurangabad have literacy rate of only 45.50%. In Gadchiroli in Nagpur division it is even lower at 42.87%. Female literacy is the lowest in many of the districts of Aurangabad division and Gadchiroli where it ranges between 26% to 30% only.

According to 1991 census nearly 40% or above of main workers were agricultural labourers in all districts of Amravati division, Pabhani, Nanded, Osmanabad and Latur in Aurangabad division, Wardha in Nagpur division and Ahmednagar in Nasik division. The picture of landless or marginally landed agricultural labour becomes clear when we find that the average size of holdings is almost uniformly higher in the districts of the old Marathwada and Vidarbha regions. When we add up the Scheduled Caste and Neo-Buddhist population Marathwada and Vidharbha have a larger Dalit population than other regions. Scheduled tribes are concentrated more in Dhule, Gadchiroli, Nasik, Thane, Yavatmal and Chandrapur districts which also have higher percentage of land area under forests.

Analysis of sex-ratio shows that in the districts such as Ratnagiri, Raigarh, Sindhudurg which are closer to the Bombay-Thane industrial belt, females are higher in number. This is largely due to male out-migration to the Bombay - Thane belt for employment. It is again male in-migration which is responsible for the low sex ratio of Greater Bombay and Thane districts. This phenomenon seems to be the reason for a sex ratio favourable to females in Satara and its reverse in nearby Pune.

Female participation in agricultural labour as per the 1991 census is higher than that of men in all districts of Maharashtra. This is true of India as a whole also. It is however particularly higher in the districts of Marathwada and Vidarbha regions and Dhule and Jalgaon in Nasik division.

2.2 Health at the District Level

Data on health indicators is not available at the district level. Even though information on health services is available, this covers only the Govt. health sector, with nearly no information

on the private sector which according to various studies caters to a little over 75% of our health care needs. (Duggal & Amin 1989 and FRCH Report forthcoming 1992). All the same we find that there seem to be a bias against Marathwada and Vidarbha regions in setting up PHCs. While 14 of the 16 districts in these regions have PHC population ratios very close to or above 1:30,000, the number of such districts is limited to 7 out of 14 districts in Konkan and Marathwada. Such a clear pattern was however not observed in the case of sub-centers. As regards the endemicity of certain diseases such as Cholera, Hepatitis and Diarrhoea for which district level data is available no definite pattern is seen across the districts.

2.3 Health Status of Tribal Pockets

Tribal areas are supposed to have 1 PHC per 20,000 population and one sub centre per 3000 population. As per these norms Maharashtra requires 265 PHCs in tribal pockets and claims to have fulfilled this norm by setting up the required number as on December 1991. Madhya Pradesh needs 752 PHCs in tribal areas while it has only 633. Kerala requires 55 tribal PHCs and has 58. Maharashtra similarly needs 1662 sub centres in tribal areas but have in position 1603 as on 31 December 1991. M.P needs 5019 sub centres but has 4935, while Kerala needs 369 sub centres and has 174 only. (Rural Health Bulletin March 1992.)

2.4 Health of Women

With regard to the health of women, not enough data is available on the morbidity and mortality. Recently a study carried out in two villages of Ghadchiroli district of Maharashtra showed that on examination of the women that as high as 92% of the women had one or more gynaecological or sexually transmitted diseases, and average was 3.6 disease per women. Only 8% of the women had undergone examination or treatment in the past. The study also found that there was a high prevalence of iron deficiency anemia in 83% and vitamin A deficiency in 58% of the women examined. (Bang R. et.al 1989)

The above mentioned study brings out the stark reality of majority of the Indian women having a low social status, marginal presence in the market economy and not enough attention being paid to women's needs, particularly in health. It has been recognised that women face health problems throughout their life cycle, starting from sex preferences in infancy, discrimination in feeding practices, biological vulnerability during the reproductive period, the affects of repeated pregnancies, to special problems such as nutritional anemia and maternal mortality (WHO 1978). The only programs which are women oriented are Maternal and Child Health Services and Family Planning, where

they are viewed as 'targets'. Manisha Gupte gives an experiential account of the problems that child bearing women in a drought prone area in Maharashtra face. The various impediments to women may be listed as follows lack of various facilities like trained health functionaries, attending women during pregnancy and labour, ante-natal care (ANCS) Services, transport facilities, competence at referral centres, availability of a sterile delivery kit, access to health care facilities (This is applicable for most of the women), safe abortion facilities, rest before and after delivery, maternity benefits and finally lack of nourishment. (Gupte M. 1989) The various programmes which are there in the government health sector, aim at only the women between the age group of 15 - 45 years. Most of the women who do not fall in this category get deprived of the health facilities. In this context it is necessary to reassess the existing health system and programs with special reference to women.

3. IMPACT OF DROUGHT ON HEALTH

Around 29000 villages in the State comprising 62% of the population and spread out in 26 districts were affected by the drought of 1992. (Sharma K, Hindu Jul. 31, 1992). Near famine degrees, but it was most acute in Marathwada and Vidarbha regions. (Venketeshan V. Times of India, Apl. 4, 1992) It has not only created severe shortage of drinking water, but has affected the entire flora and fauna of vast stretches of land and upset agricultural activity, thus drastically reducing the availability of both food and employment opportunities.

While the direct impact of drought on health can be seen in the reported incidents of spread of contagious diseases such as cholera and gastro-enteritis (Ghoshal S. Indian Express Apl. 11, 1992) the indirect impact on health caused by the decline in food production and employment opportunities is especially important. Fetching water itself was taking away a considerable part of people's time since they had to walk for miles or stand in queues for the arrival of the elusive tanker. (Ibid) In several places people had to resort to digging pits on river beds and drink the dirty water. According to an estimate made by the Economic Times in May 1992 food output in Maharashtra in 1991-92 is likely to decline from 12 million tonnes in 1990-91 to 7.9 million tonnes i.e a decrease of 34%. (Gangadharan S e.t 21.5.92)

Another report in E.T. indicated a shortfall in foodgrains production of 43% in Kharif and 67% in Rabi. (Economic Times 26.4.92) With the price of ration wheat and rice also increased this decline in production is sure to have hiked prices of the foodgrains in rural areas, thus lowering the food intake and nutritional levels of people. Add to this the contraction of purchasing power caused by the decline in rural employment and we get the true picture of the rural populace being squeezed at both the demand and supply ends of the market spectrum. The 'market' of course is drought proof.

The lack of employment in many districts have forced people to migrate to places where work is available. For example there has been an increase of 35% in migration from Bid to Ahmednagar during sugar cane cutting season. But even in Ahmednagar there wasn't enough work for so many and therefore they ended up bonded to the contractors from whom they had taken advances. A survey conducted by an N.G.O among these migrants revealed that 43% migrant families had atleast 1 person fallen ill during the period of stay at the new work place. Even minimum hygienic conditions could not be met at the places where they had migrated to. (Agashe. A Times of India May 1, 19920)

The almost decennial occurrence of drought had generated a lively

discussion in the press and among the academics on the causes of drought and how it could be prevented. There was a general consensus that there should be a move away from sugarcane cultivation which consumes 60% to 70% of irrigation water and also that the practice of tubewell irrigating should be stopped since it was lowering the water table, thereby depriving the soil of its natural moisture and making it so much more difficult to get recharged. Other suggestions were for proper programmes for water harvesting, using small check dams in place of the mega dams, afforestation and soil conservation.

4 CURRENT ISSUES

4.1 PRIVATE HEALTH SECTOR

One of the main issues which concerns the health system in the country is the role and functioning of the private health sector. In the lexicography of Indian economics, privatization is the panacea for all ills of the Indian economy. In the field of health, private sector is already the dominant sector and there is talk of privatizing it further. (Anant Phadke, 1991) With regard to Maharashtra recently a statement was made by the chief minister (TOI 2/9/92) that for the efficient functioning of public health services the government is planning to hand over Primary Health Centres to the private sector.

Here we have used largely available data at the all India level since we do not have much on the state level. Broadly, the private health sector consists of the general practitioners, who include licenciates and RMP's, consultant specialists, hospitals and dispensaries. It includes also private medical colleges, pharmaceutical and medical equipment manufacturing industry which are predominantly multi-national. There are also the laboratories which carry out tests right from blood testing to CAT scans. In India the share of this sector is between 4 to 5 percent of GDP. This share at today's prices works out to between Rs 16,000 crores to Rs 20,000 crores per year. (Ravi duggal, Sunil nandraj, Regulating the private health sector, MFC bulletin 173/174 July/Aug).

As regards utilization of health facilities, in the household health expenditure study in Jalgaon, Maharashtra, it was found that nearly 3/4ths of the illness episodes were treated by private practitioners and hospitals, and only 13% of the illness episodes availed of government facilities. The utilization pattern also showed that private practitioner utilization is more in rural areas (79.82%) as compared to urban areas (73.45%). (Duggal R. 1989) In the household health expenditure study conducted in two districts of Madhya Pradesh it was found that private sector utilization was 69.05% of the illness episodes, 6.94% government hospitals, 6.88% Primary Health Centre and 1.73% Sub-centre. In Kerala (KSSP study) in case of acute illness only 23% of the patients went to government health institutions for treatment and 66% to private health providers (Kannan 1991).

The growth of this sector after independence has been at a very fast pace. This growth has been unregulated and unaccounted leading to maldistribution, irrational and unethical practices, and decline in standards of care. General practitioners are the

most dominant sub-sector in the provision of health care services. They include practitioners trained in other systems's, but mostly practising allopathy. Also, various studies have brought out the irrational use of drugs among them which is very rampant. The use of unnecessary injections is quite well known, so much so that patients have come to expect the doctor to give them injections. Other common irrational practices are the unnecessary test recommended and unnecessary surgery. The KSSP study brought out the finding that a higher proportion of births in private hospitals are by caesarian section compared to government hospitals. Though practitioners are permitted to dispense medicine, ethically they are not supposed to make profit from it. Not only do the private practitioners run a drug business of their own, taking perhaps a higher profit rate than the medical stores, they also put to use their professional monopoly over medical knowledge to sustain themselves in the business. In a study done in Bombay it was found that on an average the monthly median income of a GP was as high as Rs. 16560. (Alex George, Earnings in Private general practice, mfc bulletin) Therefore standardization of fees is atleast possible, even ensuring a reasonable standard of income to the doctors.

The number of medical colleges has grown inspite of the Planning commission and various committees calling for a halt to the outturn of medical graduates in the country. Private medical colleges continue to mushroom all over the country and specially in Maharashtra. Many of them exist due to the political patronage they receive. Barring a few, many of the medical colleges do not have the qualified staff, equipment, hospital services to train medical graduates and are even not recognised by the Indian Medical Council. These are mainly run as to buisness interests. Education in these institutions is looked at more as a lucrative investment.

With regard to hospitals & dispensaries, majority of them are the small nursing homes with bed capacity ranging from 5 to 30 beds. These are run from residential apartments, operate in unhygienic conditions, without basic amenities like water, proper ventilation, minimum equipment, qualified staff, lack of proper sanitation facilities etc. (Duggal R. Nandraj S. 1991). Recently in the premier city of Bombay the High court appointed a committee to go into the functioning of the hospitals/nursing homes when it found that they were functioning in an unregulated manner.

Another important development in the private health sector is the entry of the corporate sector. There is rapid proliferation of corporate medical centres. The trend was started by Apollo Hospitals in 1983. Initially it made a loss, but in 1988 it declared a profit of Rs 167 lakhs and declared a dividend of 15%. (CMIE 1989) Presently there are many buisness houses entering this field.

The private sector plays a very dominant role in the drug production of the country. Many of the socially conscious organisations in the last one decade have brought out that majority of the drugs produced in the country are hazardous, useless, unnecessary and irrational. An overwhelming proportion of the drug business is in Maharashtra, especially in and around Bombay.

The production of Medical equipment began in the 70's and it has grown from Rs 2.5 crores in the earlier years to Rs 19 crores in 1983 (CEI undated). It is estimated that 80% of all medical equipment is imported through the private companies (Baru R V, 1988). The increasing demand for hitech medical equipment can be gauged from the estimates made by Confederation of Engineering Industries (CEI), working group in electronics for the 7th plan, would be to the tune of Rs 900 crores for the plan period. This with the background that millions of people in Indian have no access to basic health care. This high technology in medicine only leads to over-medicalization and high cost medical care.

Broadly, in the changing scenario of the economy people will have to raise issues of the efficiency of the private health sector, demand more accountability, standardization of fees, regulating the quantity and quality of medical service in the country.

4.2 Role of NGOs in Maharashtra

NGOs have undertaken numerous activities in providing health care services all over the country. They have experimented and come out with innovative projects and models of health care delivery system. We appreciate the work done by them in trying to meet the health care needs of the people. At this particular juncture it is necessary to critically examine the work done so that we are able to address ourselves to the various issues raised below and have a meaningful discussion on the health status of people in Maharashtra vis a vis role of NGO's.

First and the foremost, NGOs and the government have never examined nor questioned the growth, role and functioning of the private health sector. They have tried to wish it away. In many of the areas where NGOs are operating we find the private practitioners thriving. The NGO's have in fact weaned away the clientele from the government health sector and not from the private health sector. The role and functioning of the Private health sector which is the dominant sector in the health field has to be evaluated, particularly in the context of the present trend of liberalisation and privatisation in the country. NGOs will have to wake themselves up to the fact of the growing predominance role of the private health sector. When the government itself has become all the more keen to patronize them.

Secondly, the primary health care model which has been implemented by many of the NGOs needs certain basic clarifications in terms of approaches and results that has to be achieved. Though they have demonstrated that they can effectively provide specific programmes to a limited population effectively, including reaching out to the under served and the under privileged groups, there is no evidence of either change or people's participation, which NGOs are never tired of talking about. (Duggal R. 1988) In this connection it is important to state that many of us have always talked about primary health care but never of an universal health care for the people.

Many NGOs in recent years have propounded that people are willing to pay for their services. This has been used by the government to push fee-for-service in the government health sector. In spite of people paying in the form of taxes, they are forced to pay fees in the private sector due to the non-availability of curative health services from the public sector, especially in the rural areas. The fees which is being paid comes out more often from the food expenditure of the household. While the poor people in the country are already under stress due to rising prices, is it justified that people should pay fees for the health services also? In this connection it needs to be pointed that an apparently progressive organisation like the KSSP has now started advocating for user charges on the justification that with more resources the quality of health care can be improved. The public disapproval of this suggestion was seen in the large demonstrations and signature campaign against it when it was actually implemented by the present government.

In recent years the trend of the government is to contract out health services to the NGO's. The government accepts the fact that their own health services are inefficient, bureaucratic and not able to provide health services etc. It has handed over to the NGOs the management of certain specific programmes, administration of some Primary Health Centres to name a few. Are the NGO's right in taking this approach? Is it not proper that NGOs pressurise the government in providing more funds to the health sector and make it more efficient, decentralised and have an effective policy on health care. Along with this is the major question of the role and impact of the NGOs on the health sector. Most of the NGOs' work has been of a demonstrative nature rather than providing any large scale impact on the state or National level. The State has ofcourse picked up some of these demonstrations which it found convenient. Have the NGO's developed the social and political consciousness of the people in raising issues related to health? NGO's together, if they want to have the potential to network and demand the provision of Universal health care services as a constitutional right of the people and which should be provided by the government adequately on a priority basis.

5. CONCLUSIONS AND SUGGESTIONS

The State of Maharashtra presents a picture of moderate achievement in the field of health care against the context of remarkable economic development. However this overall picture has to be juxtaposed against the severe rural-urban and intraregional disparities to arrive at a more realistic understanding of the situation, both in terms of health care as well as economic development in general. The lack of proper curative facilities in the rural areas also form a piece with this overall pattern of disparities. The correction of such disparities will demand conscious political action beyond the level of clientistic politics which has enveloped the state for the last several decades. The inheritors of the radical traditions of the non-brahmin and dalit movements and the radical sections of the industrial labour movement can be expected to take up this corrective role some time in the future. But the awareness of these very sections on health issues has to be kindled. This is one area where N.G.O's should apply their mind, to. For on their own the outreach or impact of NGO's is not very large.

This is all the more necessary in combating the evils caused by the rapid and unregulated growth of private health sector in Maharashtra. Bombay and its large middle class social base offers a flourishing field for the capitalists and those who hold state power to advance all kinds of pro-market ideas which the apparent legitimacy of public opinion can be thrown back to the rural hinterland for operation through their clients. Thus, it is not just sufficient that the private health sector should be encouraged in the urban areas, some of the PHCs also should go to the private sector messiahs. But would these messiahs attend to the preventive and promotive aspects of health care which are not very lucrative? Even in curative care will they not introduce dual standards with the full legitimacy of the State? These are some questions to be addressed.

The broadest possible platforms should be created for bringing in some amount of regulation in the chaotic growth of the private health sector. Standardisation in fees, room-charges, equipment and other facilities has to be thought. N.G.O's who have a good grasp of the technical details in this regard should take a lead in educating even the otherwise sensitive sections of public opinion about this matter.

STATE-WISE ECONOMIC PROFILE

Heads		Mahara- shtra	Bihar	Kerala	Madhya Pradesh	Punjab	India
% Area of Country	1991	9.40	5.30	1.10	13.50	1.50	100.00
Population (in millions)	1991	78.70	86.30	29.00	66.10	20.00	843.90
Density (per sq.km.)	1991	256	497	747	149	401	267
% of Urban Population	1991	38.73	13.17	26.44	23.21	29.72	25.72
Sex Ratio (Females per 1000 males)	1991	936	912	1040	932	888	929
% of Literacy	1991	63.00	39.00	91.00	43.00	57.00	52.00
% of Female Literacy	1991	51.00	23.00	87.00	28.00	50.00	39.00
Dropout rates in class I-V	'82-'87	42.10	65.40	0.40	42.40	39.40	48.60
CMIE Index for Eco. Development	1987	119	48	105	68	213	100
CMIE Index for Infrastructure	1991	112	96	140	72	214	100
PCI at '70-'71 prices (in Rs.)	1991	1039	482	639	583	1652	2082
% share of Manuf sector to GDP	'80-'81	22.80	4.30	2.20	2.10	4.00	100.00
P.C. Bank Deposits (in Rs.)	1991	4977	1081	2654	1170	4565	2362
P.C. Bank Credit/Advances (in Rs.)	1991	3801	429	1570	786	2201	1570
Persons Working in Non-agl. Ent (figures in thousands)	1990	8703	2609	3139	4811	1751	60469
% of main workers in non-agl. workers	1991	40.28	19.38	61.96	24.63	43.86	35.10
% of A.L in main workers	1991	26.91	37.21	25.66	23.50	23.31	26.15
% of cultivators in main workers	1991	32.81	43.41	12.38	51.87	32.83	38.75
% of female A.L in total main workers	1991	43.58	57.92	35.76	37.33	21.90	43.56
% of male A.L in total main workers	1991	18.75	33.02	22.61	17.70	23.41	21.00
% of food crop cultn. in total area	'86-'87	68.90	90.30	24.40	79.70	76.90	71.90
% of Irrigated area to total cultivated area	'86-'87	12.40	36.70	14.80	15.60	91.30	31.40

Year
Mahara-
shtra Bihar Kerala Pradesh Punjab India

Average size of operational holding (in hectares)	'85-'86	2.65	0.87	0.36	2.91	2.77	1.68
% of villages connected with all weather roads	'87-'88	53.00	35.00	100.00	23.00	99.00	41.00
Road length (per 1000 K.ms.)	'83-'84	184	84	113	116	48	1621
% of Electrified villages	1991	100.00	69.00	100.00	87.00	100.00	82.70
% of Schedule Caste	1981	7.10*	14.50	10.00	14.10	26.90	15.80
% of Schedule Tribe	1981	9.20	8.30	1.00	23.00	-	7.80
% of total forest area	'79-'80	8.80	4.00	1.60	21.20	0.30	100.00
Average pop. size of villages	1981	1037	906	16967	583	984	911

Notes : PCI - per capita income.

SDP - State Domestic Product.

A.L - Agricultural Labourers.

* - Percentage of neo-buddhists.

PC - Per capita

Pop. - Population

Cultn - Cultivation

CMR - Centre for Monitoring Indian Economy

Sources : (1) Census of India, series 1 - paper 3, provisional population totals, workers and their

distribution, R.G. & C.C.I. 1991.

(2) Centre for Monitoring Indian Economy, District level data for Key Economic Indicators with 70 maps, 1987.

(3) Ibid - Vol 2 States - Sept. 1991.

(4) State Domestic Product, (1970-71 to 1986-87) CSO, GOI, New Delhi, June 1988.

HEALTH INDICATORS OF SELECTED STATES (Cont'd)

		Mahara- shtra	Bihar	Kerala	Madhya Pradesh	Punjab	India
Annual I.R of Poliomyelities	R	1.40	-	-	1.90	3.10	1.70
per 1000 children(0-4 yrs)	U	1.30	-	-	1.70	1.70	1.60
1981-82							
Annual Neo-natal Tetatnus	R	4.70	11.30	2.00	20.40	8.40	13.30
Mortality Rate per 1000 Live	U	4.90	5.30	1.90	1.40	3.10	3.20
Births (1981-82) (01-15 yrs)							
% of children taken Booster Dose of Polio and Triple Antigen (0 - 15 yrs) 1981-82*							
Polio	R	34.45	2.42	23.44	6.36	24.42	10.77
	U	48.62	11.94	31.73	23.88	43.84	26.82
Triple-antigen	R	30.21	0.93	21.74	1.89	15.92	7.53
	U	43.09	7.76	29.39	12.79	32.03	20.51

Notes : R = rural, U = Urban, C = Combined.

IR = Incidence Rate

* = Booster dose by sector and state and all India.

Pop. = Population.

Source : (1) Centre for Monitoring Indian Economy, Vol. 2, States, Basic Statistics relating to the Indian Economy. September 1991.
(2) National Immunization Programme. Series I, NIHPW Data - New Delhi, December 1988.
(3) Sarvekshana - Vol. XIV, No. 4, Issue No. 47, NSS Data, April-June 1991.

HEALTH INDICATORS OF SELECTED STATES

		Mahara- shtra	Bihar	Kerala	Madhya Pradesh	Punjab	India
Annual Birth Rate	R	29.5	33.8	19	38.70	28.40	31.50
per 1000 Live births	U	23.6	24.6	19.30	29.10	25.60	24.40
1987-90	C	27.5	32.9	19	36.90	27.60	29.90
Annual Death Rate	R	8.4	11.0	5.90	13.60	8.50	10.40
per 1000 Pop.	U	5.2	6.2	5.80	7.50	5.80	6.70
1987-90	C	7.3	10.6	5.90	12.50	7.80	9.60
Infant Mortality Rate	R	64	77	18	119	58	86
per 1000 Pop.	U	44	46	16	61	45	51
1990	C	58	75	17	111	55	80
% of Infant deaths to total	R	23.56	29.04	9.25	31.85	20.55	28.27
deaths	U	19.34	26.19	10.39	26.44	22.45	21.27
1981-85	C	22.43	28.86	9.47	31.13	20.98	27.16
Life Expectancy (in yrs) '81-'85		60.60	52.80	68.40	51.60	63.10	55.40
Births Attended by qualified personnel / institutions 1988		46300	23800	91100	-	80600	41200
Deaths Attended by qualified personnel / institutions 1988		58500	33200	74800	-	6900	46100
Decennial Growth Rate 1981-91		25.43	23.49	14.06	26.75	20.26	23.56
Marital Fertility Rate 1988	R	159.80	199.90	117.00	193.50	168.30	177.70
	U	139.50	177.40	120.90	166.60	152.60	146.20
	C	152.90	196.60	117.70	188.50	163.90	170.70
Statewise Immunization Coverage (0-23 months) 1986-87							
TT2 (Tetanus Toxoid)		93.70	10.10	104.00	35.60	56.20	45.60
DD2 (Diphtheria Pertussis Tetanus)		92.20	12.30	82.90	45.40	70.00	56.50
OPV3 (Oral Polio Vaccine)		92.00	9.00	91.10	36.90	71.20	48.60
BCG (Bacille Calmette Guerin)		98.80	15.10	99.20	52.70	69.00	47.90
MSL (Measles Vaccine)		23.70	0.0	32.00	8.40	18.40	16.70

RURAL HEALTH INFRASTRUCTURE IN SELECTED STATES

(1992)

Heads	Mahara- shtra	Bihar	Kerala	Madhya Pradesh	Punjab	India
Average rural Population served by a SC	5145	5065	4192	4264	4973	4576
Average rural Population Served by a PHC	29243	30060	23442	42967	6928	27168
Average rural Population served by CHC (in lakhs)	1.69	7.07	3.95	2.90	1.64	3.10
Maximum Radial dist. covered by a SC (in Kms.)	3.21	1.91	1.52	3.42	2.34	2.76
Max Radial dist. covered by a PHC (in Kms.)	7.62	4.66	3.59	10.87	2.77	6.73
Maximum Radial dist. covered by a CHC (in Kms.)	18.35	22.63	14.78	28.23	13.48	22.81

Note : SC-sub centre, PHC - Primary Health Centre, CHC - Community Health Centre.

Source : Rural Health Statistics in India, MHPW, GOI, New Delhi, March 1992. (Figures are provisional).

HEALTH INFRASTRUCTURE IN SELECTED STATES

(1990)

	Mahara- shtra	Bihar	Kerala	Madhya Pradesh	Punjab	India
No. of Hospitals						
% rural	11.80	25.50	79.44	22.93	43.77	31.33
% govt./local bodies	28.23	81.54	7.74	100.00	85.28	43.21
% Private	71.77	18.46	92.26	-	14.72	56.79
Total (actuals)	1881	298	2053	362	265	9663
No of Dispensaries						
% rural	9.22	96.25	70.94	76.16	85.58	45.12
% govt.	17.03	100.00	2.69	100.00	99.23	42.46
% Private	82.97	-	97.31	-	0.76	57.52
Total (actuals)	9135	427	1748	365	1567	27031
No. of Beds (per 1000)						
% rural	5095.77	32624.01	519.70	24196.20	1595.99	6189.82
govt./local bodies	1348.38	3803.98	985.28	2963.34	1103.87	2239.71
% Private	2132.71	15595.89	655.06	-	5323.17	4901.51
Total (actuals)	95326	28233	73789	22318	22084	54926

Source : Health Information of India, CBHI, DGHS, GOI, New Delhi 1990.

PLAN EXPENDITURES IN MAHARASHTRA

Heads	% of Sectorial Plan Expenditures to Total Plan Expenditures					
	1st Plan	2nd Plan	3rd Plan	4th Plan	5th Plan	6th Plan
1. Agriculture & Allied Services	16.94	15.55	28.39	19.51	11.58	6.01
2. Co-operation	2.67	13.36	2.48	2.56	1.32	13.67
3. Irrigation & Power	27.67	31.18	36.52	44.76	53.08	48.44
4. Industry & Mines	2.30	2.83	3.41	3.94	3.97	3.43
5. Transport & Communication	8.98	9.81	8.61	8.07	8.27	6.46
6. Scientific & Technical Services	-	-	-	-	-	0.01
7. Social & Community Services	46.44	25.87	20.54	20.76	16.09	18.85
8. Economical, Social Welfare Schemes	-	-	-	-	-	0.07
9. Others	-	1.40	0.04	0.40	5.69	3.06
10. Total Plan Expenditures (in millions of Rs.)	1547.1	2263.0	4347.3	10045.1	26601.3	65493.9

Note : All figures except totals are percentages.

Source : Statistical Abstract of Maharashtra State 1986-87, State Planning Commission.
Directorate of Economics and Statistics, Govt. of Maharashtra, March 1991.

HEALTH HUMANPOWER IN SELECTED STATES

(1981)

Type of Medical Practitioner	Mahara-shtra	Bihar	Kerala	Madhya Pradesh	Punjab	India
Allopathy						
% rural	24.28	34.56	78.88	22.45	40.46	28.46
Total	31964	10802	7774	10697	9541	209511
Ayurvedic & Unani						
% rural	44.85	64.21	76.46	55.65	48.26	55.54
Total	6272	3068	7826	7917	5039	70411
Homeopathy						
% rural	52.83	69.42	75.45	36.13	36.36	57.29
Total	2300	9117	3393	1251	462	63714
Not Elsewhere Classified						
% rural	38.00	78.23	82.23	47.26	19.51	59.66
Total	1808	1139	1133	1623	123	43827
Total						
% rural	29.47	53.56	77.61	37.36	42.76	41.13
Total	42344	24126	20126	21488	15165	373853

Source : Census of India 1981, General Economic Table, Series I - Part III-B., Census Commissioner, GOI.

REGISTERED PRACTITIONERS IN SELECTED STATES

As per various councils

Type of Medical Practitioner	Mahara-shtra	Bihar	Kerala	Madhya Pradesh	Punjab	India
Allopaths (1987)	41035	23450	15568	8526	24615	331630
Ayurveda (1985)	30852	34706	11662	27827	17166	264800
Homeopathy (1986)	13444	21572	4571	5384	6062	131091
Unani (1986)	535	3174	57	221	5606	28715

Note : Data with regard to Madhya Pradesh is due to under reporting by the respective council.

Source : (1) Indian systems of Medicine and Homeopathy in India, Planning and Evaluation Cell, M.H.F.W, GOI., New Delhi 1986.
(2) Health Information of India, CBHI, DGHS, GOI, 1991.

MEDICAL RELIEF, EDUCATION AND DRUGS DEPARTMENT
MAHARASHTRA

1990-91 (Actuals)

Summary	% to Totals
1. Medical Relief	
Urban	45.36
Rural	3.55
2. Medical Education, Training & Research	22.70
3. Direction and Administration	0.42
4. Employee State Insurance Scheme	24.62
5. Others	3.35

	100.00
Total Rs.	1608.93 millions

Notes : (1) Percentages are to total expenditures
(2) Totals includes plan & non plan expenditures.

Source : Civil Budget estimates 1992-93 Part B.
Medical Education Drugs Dept : Dept. of Finance, Govt. of
Maharashtra, 1992.

RATIOS OF EXPENDITURE ON VARIOUS HEALTH PROGRAMS IN SELECTED STATES

(in percentages)

	Year	Punjab	Mahara- shtra	Kerala	M.P.	Bihar	All India
Rev. Exp. on health (-water supply) per capita (in Rs.)	1971	7.25	7.64	7.03	4.73	2.88	6.11
	1985	37.36	35.62	36.02	21.69	13.10	31.91
Rev. Exp. on health as % of total Govt. Exp. (in %)	1971	7.22	5.38	9.16	9.66	6.53	3.84
	1985	7.21	6.31	8.50	6.45	5.43	3.47
Rev. Exp. on Curative Services per capita (in Rs. per capita)	1971	2.59	2.21	4.10	1.40	.87	2.28
	1985	19.66	8.78	18.87	8.49	6.66	12.02
Curative Exp. as % of total Health Expenditure	1971	35.64	28.92	58.27	29.68	30.31	37.29
	1985	52.62	24.64	52.39	39.13	50.83	37.66
Rev. Exp. on Diseases Programme, per capita (in Rs.)	1971	1.86	1.44	.05	.80	.43	.83
	1985	4.03	6.89	1.84	2.69	1.59	3.92
Disease Prog. Exp. as % of Health Exp.	1971	25.66	18.87	.76	16.94	15.06	13.63
	1985	10.78	19.35	5.11	12.41	12.14	12.27
F.P. (-MCH) Exp. as % of total Health Expenditure	1972	12.62	12.04	17.81	13.17	12.97	10.04
	1985	13.12	17.20	14.36	22.00	21.22	16.23
Medical Edu. Exp. as % of Health Expenditure	1971	7.78	5.72	7.76	5.92	4.33	7.15
	1985	8.32	6.44	9.01	4.53	5.92	8.92
Rev. Exp. on Water Supply and Sanitation per capita (in Rs.)	1976	5.98	3.18	1.39	1.32	1.03	1.67
	1985	11.14	17.64	5.40	13.77	3.44	9.02

Sources : State Sector Health Expenditures. Ravi D., Sunil N., Sahana S. FRCH, 1992.
Original Source C.F.R.A, Comptroller and Auditor General of India, GOI, various years.

**FAMILY WELFARE EXPENDITURE
MAHARASHTRA**

1990-91 (Actuals)

A		B		
Summary		Expenditures under Selected Services		
Items			Rural Family Welfare Services	Maternal & Child Health Services
Direction & Administration	9.39	Salaries	76.29	43.90
Training	3.41	Travel Expenses	4.74	3.34
Rural Family Welfare Services	23.25	Material & Supply	1.76	44.70
Urban Family Welfare Services	5.90	Others	17.21	8.03
Maternity & Child Health Services	18.59			
Transport	0.83			
Compensation	17.64			
Mass Education	0.95			
Selected Area Programs	5.35			
Other Services & Supplies	13.34			
Other Expenditures	1.35			
	100.00		100.00	100.00
TOTAL	644.71	TOTAL	149.89	119.85

- Notes : (1) Totals are in Rupees millions
 (2) Totals includes plan & non plan.
 (3) Except totals all other figures are percentages
 (4) B Travel includes POL and motor vehicles

Source : Same is for Public Health.

**PUBLIC HEALTH EXPENDITURE
MAHARASHTRA**

1990-91 (Actuals)

A		B		C				
Summary of Public Health Exp.		Exp. on Prevention & Control of Diseases		Expenditure under Selected Programmes				
Head				Filaria Malaria Cholera Leprosy Control Control Control Control				
Direction & Administration	43.40	Filaria Control Prog.	5.11	Salaries	74.00	66.66	86.21	78.87
Training	0.18	Malaria Control Prog.	60.27	Travel Expenses	3.65	2.89	3.87	7.91
Minimum Needs Prog.	19.04	Cholera Control Prog.	3.06	Materials & Supply	-	20.53	7.82	4.41
Preventions & Control of diseases	34.97	Guinea Worm Control Prog.	0.31	Others	22.33	9.90	2.08	8.80
Manufacturers of Sera and Vaccines	0.14	Leprosy Control Prog.	21.06					
Public Health Laboratories	0.91	B.C.G. Vaccination & TB Control Prog.	10.00					
Publicity	0.21	Goitre Control Prog.	0.04					
Other	0.80	Others	0.04					
	100.00		100.00		100.00	100.00	100.00	100.00
TOTAL	1767.13	TOTAL	Rs. 617.99	TOTAL	Rs. 31.56	372.51	19.03	130.17

Notes : (1) Totals are in Rupees millions.

(2) Except total all other figures are in percentages.

Source: Civil Budget estimates 1992-93, Public Health, Dept. of Finances, Govt. of Maharashtra, 1992.

**SOCIO-ECONOMIC PROFILE OF DISTRICTS
IN MAHARASHTRA**

	% Agl labrs in main wrkrs	% of Cultv in main wrkrs	% of Non-agl labrs in main wrkrs	Sex ratio fem agl labrs per 1000 males	CMIE index of development	% of fem agl labr in total main labrs	% of mal agl labr in total main labrs	Avg size of optn holding (in hecst)	Road length per 100 sq kms d	% of Electrifie villages
	1991	1991	1991	1991	1985	1991	1991	85-86	86-87	1990
REGION										
Konkan										
Greater										
Bombay	.10	.12	99.78	436.59	1138	.22	.08	.71	8	100.00
Raigarh	17.74	45.16	37.10	1039.37	101	24.42	13.87	1.62	62	100.00
Ratnagiri	9.85	63.79	26.36	1141.86	47	11.67	8.37	2.52	53	100.00
Sindhudurg	11.64	59.29	29.07	755.20		12.91	10.84	2.06	44	100.00
Thane	9.98	20.40	69.62	952.25	188	21.19	6.64	1.94	48	100.00
Nasik										
Ahmednagar	26.66	47.44	25.90	1221.92	132	37.36	19.75	2.78	80	100.00
Dhule	39.61	37.81	22.58	1178.60	72	60.44	28.16	2.71	58	100.00
Jalgaon	44.39	30.00	25.61	1062.48	100	62.84	33.84	2.58	57	100.00
Nasik	24.19	43.33	32.48		90	37.22	16.40	2.98	68	100.00
Pune										
Kolhapur	17.30	45.53	37.17	1007.31	106	28.09	12.47	1.27	67	100.00
Pune	14.23	31.37	54.40	1253.60	211	26.32	9.03	2.68	61	100.00
Sangli	24.47	43.86	31.67	879.32	93	41.39	18.00	2.11	88	100.00
Satara	21.36	49.95	28.69	1291.11	93	34.54	14.31	1.60	79	100.00
Solapur	31.71	33.80	34.49	1021.97	93	49.40	23.22	3.70	62	100.00
Aurangabad										
Aurangabad	28.47	41.11	30.42	1303.61	90	43.60	19.60	2.73	40	100.00
Beed	30.62	49.25	20.13	1295.33	62	43.66	22.08	2.96	42	100.00
Jalna	35.73	46.65	17.62	1248.28		48.70	26.82	3.09	29	100.00
Latur	39.22	39.56	21.22	1090.76		56.07	29.53	3.56	47	100.00
Nanded	41.25	36.91	21.84	1115.14	63	58.72	30.98	3.02	53	100.00
Osmanabad	41.39	40.75	17.86	1192.68	65	60.40	30.09	3.83	46	100.00
Parbhani	41.40	39.11	19.49	1124.79	62	57.19	31.59	3.01	43	100.00
Amravati										
Akola	50.92	26.18	22.90	1065.63	65	70.14	39.41	3.31	34	100.00
Amravati	52.41	21.41	26.19	929.83	93	75.15	40.90	2.77	33	100.00
Buldhana	43.56	39.03	17.41	1159.64	72	56.28	34.51	2.96	34	100.00
Yavatmal	53.54	27.05	19.41	1150.43	72	70.90	41.77	3.84	37	100.00
Nagpur										
Bhandara	32.53	40.25	27.22	1186.56	72	40.41	26.42	1.49	52	100.00
Chandrapur	35.68	35.53	31.79	1392.56	59	55.70	23.78	2.85	39	100.00
Gadchiroli	28.75	55.99	15.26	1268.58		40.64	20.97	2.33	17	100.00
Nagpur	24.04	18.40	57.56	1214.83	110	46.14	15.20	3.14	49	100.00
Wardha	46.30	27.64	26.06	1139.11	84	66.46	34.41	3.15	35	100.00

SOCIO-ECONOMIC PROFILE OF DISTRICTS
IN MAHARASHTRA

REGION	Area in sq	% of State	Population	Density	Decennial	% of Urban	Sex ratio	Estimated	Estimated	% Main
	km	area		per sq km	pop growth	pop		litreacy %	% fem lit	workers in
	1991		1991	1991	rate '81-'91	1991	1991	1991	1991	pop 1991
Konkan										
Greater Bombay	603	.20	9909547	16434	20.21	100.00	819	87.88	79.67	34.67
Raigarh	7148	2.32	1814628	254	22.08	17.84	1012	65.16	53.50	39.52
Ratnagiri	13054	2.68	1539416	188	11.58	8.97	1211	64.50	54.19	37.33
Sindhudurg	—	1.70	830726	160	6.38	7.60	1140	81.44	72.42	35.07
Thane	9558	3.11	5226709	547	55.95	64.74	880	71.20	60.88	36.97
Nasik										
Ahmednagar	17048	5.54	3362359	197	23.96	15.42	952	60.94	45.81	42.51
Dhule	13150	4.27	2529346	192	23.37	20.53	959	51.07	38.41	39.93
Jalgaon	11765	3.82	3183934	271	21.60	27.42	942	65.35	50.96	40.18
Nasik	15530	5.05	3844525	248	28.50	35.52	941	61.99	49.28	41.33
Pune										
Kolhapur	8047	2.48	2974352	387	21.05	26.40	966	69.65	55.36	38.45
Pune	15642	5.08	5511457	352	32.34	50.76	936	73.05	61.25	37.15
Sangli	8572	2.79	2197977	256	19.83	22.84	966	65.66	52.17	36.46
Satara	10484	3.41	2445000	233	19.93	12.91	1035	59.03	55.01	36.20
Solapur	15017	4.83	3224034	216	24.57	28.81	936	56.99	41.93	38.74
Aurangabad										
Aurangabad	16305	3.30	2209476	219	39.33	32.78	924	56.11	38.79	39.97
Beed	11085	3.45	1818499	170	28.70	17.96	947	48.47	31.64	41.70
Jalna		2.47	1362546	177	32.26	16.92	958	44.68	26.55	44.07
Latur		2.40	1673070	234	29.41	20.42	944	54.75	39.14	39.30
Nanded	10502	3.41	2326100	221	32.97	21.71	947	46.83	30.02	39.95
Osmanabad	14210	2.44	1271870	168	23.52	15.22	943	53.72	38.29	41.44
Parbhani	12561	3.59	2114770	192	28.74	22.50	952	46.19	28.57	42.18
Amravati										
Akola	10575	3.44	2211016	209	21.02	28.68	940	65.99	53.02	41.72
Amravati	12212	3.97	2208568	181	18.65	33.01	938	71.72	62.38	40.30
Buldhana	9661	3.14	1881446	195	24.70	20.63	955	60.72	45.13	44.75
Yashwantrao Chavan	13394	4.41	2073708	153	19.36	17.21	949	58.34	44.61	44.57
Wardha										
Wardha	9213	2.99	2103276	226	14.46	13.15	989	66.27	51.50	45.48
Wandara	25923	3.41	1768958	155	24.84	28.04	948	60.72	47.34	42.13
Wandrapur		5.02	785626	55	23.27	8.71	976	42.87	28.71	45.59
Gadchiroli										
Nagpur	9931	3.23	3279587	332	26.69	61.84	923	76.03	66.56	35.50
Wardha	6310	2.05	1065589	169	15.00	26.61	941	73.39	63.42	42.33

Sources for Socio Economic Profile of Districts in Maharashtra

- (1) Census 1991 - Paper 2, Series 1, Provisional Population Totals : Rural - Urban Distribution, RG, CCI - 1991.
- (2) Ibid, Series 14, Paper 1. Provisional Population Totals : Rural - Urban Distribution, RG, CCI - 1991.
- (3) Ibid - Series 1, Paper 3. Provisional Population Totals: Rural - Urban Distribution, RG, CCI - 1991.
- (4) CMIE - Centre for Monitoring Indian Economy - Dist. level Data for Key Economic Indicators with 70 maps, Nov. 1987.
- (5) Ibid - Economic Intelligence Service Profiles of Districts - July 1985.
- (6) Statistical Abstract - 1986-87 of Maharashtra, Directorate of Economics & Statistics - Govt. of Maharashtra, Govt. Press, Nagpur 1991.
- (7) Selected Indicators for Districts in Maharashtra and States in India, 1988-89 (Aug. 1991).

Note : % of total forests is got by dividing total forests by total area of district.

Pop = Population

* =CMIE Index of Economic Development.

fem =Female.

Agl Labrs =Agricultural Labourers.

Cultv =Cultivators, wrkrs =workers.

Avg =Average, optn =operational.

SC =Schedule Caste, ST =Schedule Tribe.

SOCIO-ECONOMIC PROFILE OF DISTRICTS
IN MAHARASHTRA

	% of SC popn in State	% of ST popn in State	% of neo-buddhi st in state	% of Forest	Avg village popn
	1981	1981	1981		1981
REGION					
Konkan					
Greater					
Bombay	4.84	1.02	5.7	8.62	
Raigarh	1.69	12.80	4.6	23.95	699
Ratnagiri	1.09	1.94	6.0	4.53	907
Sindhudurg	4.04	.86			1053
Thane	2.50	21.76	3.7	42.48	1068
Nasik					
Ahmednagar	10.62	6.93	2.3	11.09	1568
Dhule	4.18	40.53	1.7	34.24	1088
Jalgaon	5.89	8.25	4.1	16.77	1329
Nasik	6.21	23.45	3.4	21.84	1185
Pune					
Koynapur	12.23	1.04	1.0	21.88	1584
Pune	7.54	3.88	5.2	13.21	1251
Sangli	11.16	.85	2.3	5.83	2030
Satara	6.21	.64	5.1	15.29	1251
Solapur	14.31	1.96	1.8	2.50	1664
Aurangabad					
Aurangabad	5.95	3.68	7.9	6.03	953
Beed	11.17	.87	3.7	1.95	975
Jalna	6.55	1.96			968
Latur	16.43	2.68			1236
Nanded	11.30	10.19	9.8	11.28	998
Osmanabad	14.07	1.88	4.3	.38	1278
Parbhani	8.77	4.60	11.9	2.96	926
Amravati					
Akola	5.51	6.28	16.2	.63	888
Amravati	6.06	12.98	11.8	30.67	776
Buldhana	6.18	4.40	12.4	16.13	966
Yavatmal	4.95	21.30	8.6	27.33	843
Nagpur					
Bhandara	9.75	16.22	9.0	49.51	983
Chandrapur	6.39	21.07	9.8	71.50	800
Gadchiroli	6.86	39.32			411
Nagpur	7.05	13.65	13.3	28.38	675
Wardha	3.93	15.35	13.9	13.87	685

GROWTH OF PRIVATE HEALTH SECTOR IN INDIA

Heads	Across years	
Practitioners	(1942-43)	(1990)
All systems	72-6%	* 83% to 85%
Medical Colleges	(1950)	(1986)
Allopathy	3.57%	17%
Ayurvedic		55%
Unani		64.7%
Homeopathy		75.2%
Hospitals	(1974)	(1988)
	18.6%	55.9%
Dispensaries (1981)	13.8%	49.4%
Beds	21.5%	29.9%
Drug Production	(1974)	(1984)
Bulk drugs	64.9%	79.4%
Formulations	95%	93.3 (1980)
Imports of Medical Equipment	(1977-78)	(1986-87)
	941.20 lakhs	6500 lakhs

Source :

Bhore Committee (1946) Report of the Health Survey and Development
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* Estimated-Private Sector and Privatisation in the Health Care Services.
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HEALTH INFORMATION AT THE DISTRICT LEVEL

1989

Districts	ENDEMIC DISEASES			GOVERNMENTAL HEALTH INFRASTRUCTURE IN RURAL AREAS (1989)					
	Cholera	Infective Hepatitis	Diarrhoea	Function- ing SC	Function- ing CHC	Hospitals & Dispen. (Govt.)	PHC	No. of Rural Popula- tion served by	
								SC	PHC
Baigad	ME	LE	ME	276	9	3	49	5401.83	30426.65
Ratnagiri	LE	LE	ME	373	10	3	64	3757.02	21896.38
Sindhudurg	LE	LE	LE	246	7	2	36	3120.35	21322.36
Thane	LE	HE	ME	456	13	8	72	4041.74	25597.68
Dhule	LE	HE	HE	309	12	3	69	6504.96	29130.93
Jalgaon	HE	HE	ME	375	13	4	69	6162.08	33489.55
Nasik	HE	HE	ME	577	16	2	85	4296.23	29163.84
Ahmednagar	LE	ME	LE	485	13	1	84	5834.62	33688.01
Pune	HE	HE	HE	496	14	2	78	5471.89	34795.58
Solapur	HE	HE	HE	328	10	2	60	6997.36	38252.25
Kolhapur	ME	HE	LE	368	12	4	53	5948.40	41302.09
Sangli	ME	ME	ME	267	9	-	65	6351.93	26091.77
Satara	ME	ME	LE	306	12	3	63	6958.85	33800.11
Aurangabad	ME	HE	ME	248	7	1	40	5988.39	37128.00
Beed	LE	HE	HE	252	8	2	41	5920.14	36387.20
Jalna	LE	LE	ME	169	5	1	30	6698.38	37734.20
Nanded	HE	HE	HE	331	10	6	52	5501.59	35019.75
Latur	LE	ME	HE	234	8	1	39	5690.21	34141.23
Osmanabad	LE	ME	ME	204	6	1	36	5285.91	29953.50
Parbhani	ME	ME	HE	340	8	1	44	4820.24	37247.27
Akola	ME	ME	ME	326	8	3	48	4836.93	32850.83
Amravati	HE	ME	HE	285	9	4	50	5191.59	29592.06
Buldhana	LE	ME	ME	364	7	5	42	4102.65	35556.31
Yectmal	ME	ME	ME	354	11	5	54	4849.74	31792.76
Bhandara	LE	LE	ME	426	11	6	61	4288.16	29946.85
Chandrapur	HE	LE	LE	276	0	1	58	4611.86	21946.10
Gadchiroli	LE	LE	LE	265	7	1	34	2706.45	21094.41
Nagpur	HE	HE	ME	300	8	6	39	4171.85	32091.13
Wardha	ME	LE	LE	162	5	2	24	4827.60	32586.29
Greater Bombay	-	-	-	-	-	10	-	-	-

Notes : ME = Moderately Endemic, LE = Low Endemic, HE = High Endemic, SC = Sub-centre,
CHC = Community Health Centre, PHC = Primary Health Centre.

Source : Health Directory, DHS Govt. of Maharashtra 1990.

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